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<div>22428      7590      01/29/2008</div> <div>FOLEY AND LARDNER LLP</div> <div>SUITE 500</div> <div>3000 K STREET NW</div> <div>WASHINGTON, DC 20007</div>				
			EXAMINER	
			PIZIALI, JEFFREY J	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/609,468	Applicant(s) KODATE ET AL.	
	Examiner Jeff Piziali	Art Unit 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4,5,8,16-18 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4,5,8,16-18 and 21-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/12/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 30 October 2007 has been entered.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

3. The drawings were received on 10 February 2006. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 5, 8, 16-18, and 21-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 4 recites the limitation "exposed" in lines 6 and 8. There is insufficient antecedent basis for this limitation in the claim. It would be unclear to one having ordinary skill in the art what claimed element(s) the first and second wires are exposed to. Are the wires exposed to the same thing? To each other? Or are the two wires exposed to distinct and separate elements?

7. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "a substrate" (in line 3), "a counter substrate" (in line 15), and "the substrate" (in lines 5, 15, and 16). It would be unclear to one having ordinary skill in the art whether "the substrate" refers to the "counter substrate;" or rather refers to the earlier claimed "a substrate."

8. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "display signals" (in lines 3-4) and "the display signal" (in lines 5 and 11). It would be unclear to one having ordinary skill in the art whether "the display signal" refers to one of the earlier claimed "display signals;" or rather refers to a separate and distinct display signal.

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9. Claim 8 recites the limitation "that" (in lines 7 and 10). There is insufficient antecedent basis for this limitation in the claim. It would be unclear to one having ordinary skill in the art whether "that" refers to (for example) the earlier claimed "switching device," the "one data line," or the "pixel electrode."

10. Claim 16 recites the limitation "exposed" in lines 4 and 6. There is insufficient antecedent basis for this limitation in the claim. It would be unclear to one having ordinary skill in the art what claimed element(s) the first and second wires are exposed to. Are the wires exposed to the same thing? To each other? Or are the two wires exposed to distinct and separate elements?

11. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "a substrate" (in line 4), "a counter substrate" (in line 14), and "the substrate" (in lines 6, 14, and 15). It would be unclear to one having ordinary skill in the art whether "the substrate" refers to the "counter substrate;" or rather refers to the earlier claimed "a substrate."

12. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural

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cooperative relationships are between "a display signal" (in claim 16, line 2) and "a display signal" (in claim 18, lines 2-3). It would be unclear to one having ordinary skill in the art whether "a display signal" (in claim 18, lines 2-3) refers to the same display signal in claim 16; or rather refers to a separate and distinct display signal.

13. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "a scan signal" (in claim 16, line 3) and "a scan signal" (in claim 18, lines 5 and 8). It would be unclear to one having ordinary skill in the art whether "a display signal" (in claim 18, lines 5 and 8) refers to the same identical scan signal; or rather refers to one or more separate and distinct scan signals.

14. The term "at least one of the first and second wires, the substrate, and the counter substrate" in claim 24 (see lines 3-4) is a relative term which renders the claim indefinite. The term "at least one of the first and second wires, the substrate, and the counter substrate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would unclear to one having ordinary skill in the art whether the spacer must be in direct physical contact with both of the "first and second wires," or rather if contact with only one of the two wires would suffice.

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15. The term "at least one of the first and second wires, the substrate, and the counter substrate" in claim 27 (see lines 3-4) is a relative term which renders the claim indefinite. The term "at least one of the first and second wires, the substrate, and the counter substrate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would unclear to one having ordinary skill in the art whether the spacer must be in direct physical contact with both of the "first and second wires," or rather if contact with only one of the two wires would suffice.

16. Claims 5, 17, and 21-23, 25, 26, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon rejected base claims.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 4, 5, 16, 17, and 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the *Instant Application's Description of Prior Art* in view of *Watanabe et al (US 5,150,239 A)*.

Regarding claim 4, the Instant Application's Description of Prior Art discloses an image display element/device, comprising: a plurality of data lines to which display signals are applied (see Page 1, Line 19), the data lines being embedded in a substrate [i.e., "TFT array substrate"]; a plurality of scan lines to which scan signals are applied (see Page 1, Line 19), the scan lines being embedded in the substrate (see Page 1, Lines 10-25); a first wire [Fig. 6A; 32] having a surface which is exposed [see Fig. 10 -- wherein a surface portion is "exposed" to insulative spacer 51], the first wire being electrically connected to one of the scan lines; and a second wire [Fig. 6A; 33] having a surface which is exposed (see Page 13, Line 8 - Page 14, Line 22), the second wire [Fig. 6A; 33] being arranged at a first distance of less than or equal to  $10\mu\text{m}$  [see Fig. 10 --  $L < 5\mu\text{m}$ ] of the first wire [Fig. 6A; 32]; a liquid crystal layer [Fig. 10; 50] disposed between the exposed surface of the first wire [Fig. 10; the surface portion of wire 47 exposed/directly contacting spacer 51] and the exposed surface of the second wire; an insulator [Fig. 10; 51] in direct physical contact with the entire exposed surface of at least one of the first and second wires [Fig. 10; 47], wherein the entire exposed surface of the at least one of the first and second wires is isolated from the liquid crystal layer by the insulator (see Fig. 10; Page 21, Line 9 - Page 22, Line 14); and a counter substrate [Fig. 10; 48 and/or 49] that is disposed



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opposite to the substrate (see Page 1, Lines 22-23), wherein the counter substrate is disposed at a second distance from the substrate (see Page 21, Line 9 - Page 22, Line 14), and wherein the insulator is a spacer [Fig. 10; 51] that prescribes the second distance (see in particular Page 21, Lines 14-15).

The Instant Application's Description of Prior Art does not expressly disclose that no portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer.

However, Watanabe does disclose an insulator [Fig. 1; 104] in direct physical contact with the entire exposed surface of at least one of a first and second wire [Fig. 1; 102, 103] such that no portion of the at least one of the first and second wires is in direct physical contact with a liquid crystal layer [Fig. 1; 107] (see Column 3, Lines 17-25).

The Instant Application's Description of Prior Art and Watanabe are analogous art, because they are both from the shared field of liquid crystal display devices.

Firstly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, so as to provide the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates.

Secondly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because all the claimed elements were known in the prior art and one skilled in the art could have

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combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results (e.g., providing insulation around wires reduces signal crosstalk and leakage) to one of ordinary skill in the art at the time of the invention.

Thirdly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because the substitution of one known insulator layer for another would have yielded predictable results (e.g., providing insulation around wires reduces signal crosstalk and leakage) to one of ordinary skill in the art at the time of the invention.

Fourthly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because the technique for improving (e.g., providing insulation around wires reduces signal crosstalk and leakage) a particular class of devices (e.g., wire structures / arrangements) was part of the ordinary skill in the art, in view of the teaching of the technique for improvement in other situations (e.g., Watanabe's wire insulation).

Fifthly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because this particular known technique (e.g., providing insulation around wires reduces signal crosstalk and leakage) was recognized as part of the ordinary capabilities of one skilled in the art.

Sixthly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because a person of ordinary skill has good reason (e.g., providing insulation around wires reduces signal crosstalk and leakage) to pursue the known options within his or her technical grasp (i.e., using additional amounts, sizes, shapes of insulation, for example). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.

Seventhly, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because design incentives (e.g., providing insulation around wires reduces signal crosstalk and leakage) or market forces provided a reason to make an adaptation, and the invention resulted from application of the prior knowledge in a predictable manner.

Regarding claim 5, the Instant Application's Description of Prior Art discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see Page 13, Lines 8-21).

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claim 4; furthermore, the Instant Application's Description of Prior Art discloses a data line driving circuit and a scan line driving circuit (see Page 1, Lines 10-25).

Regarding claim 17, the Instant Application's Description of Prior Art discloses a potential of the second wire is substantially equal to a potential of a scan line other than the one scan line (see Page 13, Lines 8-21).

Regarding claim 21, the Instant Application's Description of Prior Art discloses the first distance from the second wire to the first wire is less than or equal to  $5\mu\text{m}$  [wherein the distance measurement is taken from the left-side edge of the first wire to the right-side edge of the second wire, for instance] (see Page 13, Line 8 - Page 14, Line 22).

Regarding claim 22, this claim is rejected by the reasoning applied in rejecting claim 21.

Regarding claim 23, the Instant Application's Description of Prior Art discloses one of the first and second wires is in direct physical contact with the liquid crystal layer (see Fig. 10).

Regarding claim 24, the Instant Application's Description of Prior Art discloses the spacer extends through a thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the substrate, and the counter substrate (see Fig. 10).

Regarding claim 25, the Instant Application's Description of Prior Art discloses the liquid crystal layer is in direct physical contact with the substrate and the counter substrate [Fig. 10; 48] (see Fig. 10; Page 21, Lines 10-11).

Regarding claim 26, the Instant Application's Description of Prior Art discloses one of the first and second wires is in direct physical contact with the liquid crystal layer (see Fig. 10).

Regarding claim 27, the Instant Application's Description of Prior Art discloses the spacer extends through a thickness of the liquid crystal layer such that the spacer is in direct physical contact with the at least one of the first and second wires, the substrate, and the counter substrate (see Fig. 10).

Regarding claim 28, the Instant Application's Description of Prior Art discloses the liquid crystal layer is in direct physical contact with the substrate and the counter substrate [Fig. 10; 48] (see Fig. 10; Page 21, Lines 10-11).

20. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the *Instant Application's Description of Prior Art* and *Watanabe et al (US 5,150,239 A)* as applied to claims 4 and 16 above, and further in view of *Kwon (US 6,486,930 B1)*.

Regarding claim 8, the Instant Application's Description of Prior Art does not expressly disclose any particular display element arrangement of pixel electrodes and switching devices.

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However, Kwon does disclose a first pixel electrode [Fig. 5A; 71c] and a second pixel electrode [Fig. 5A; 73c] that are supplied with display signals from one of the data lines [Fig. 5A; D1]; a first switching device [Fig. 5A; 71b] that controls a supply of the display signal in the one data line, wherein the first switching device is electrically connected between the one data line and the first pixel electrode and that has a gate electrode; a second switching device [Fig. 5A; 71a] that is electrically connected between the gate electrode of the first switching device and the one scan line [Fig. 5A; G1]; and a third switching device [Fig. 5A; 73] that is connected to the one data line and that controls a supply of the display signal to the second pixel electrode (see Column 3, Line 59 - Column 4, Line 36).

The Instant Application's Description of Prior Art and Kwon are analogous art, because they are both from the shared field of active matrix liquid crystal display devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the substrate fabrication techniques of the Instant Application's Description of Prior Art to manufacture Kwon's multiplexed image structure, so as to reduce the necessary number of data lines.

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claim 8; furthermore, Kwon discloses a first pixel electrode [Fig. 5A; 73c] and a second pixel electrode [Fig. 5A; 71c] that are supplied with a display signal from a same data line [Fig. 5A; D1]; a first switching device [Fig. 5A; 73] that controls the supply of the display signal from the data line to the first pixel electrode, and that is driven based on a scan signal supplied from a first scan line [Fig. 5A; G1]; a second switching device [Fig. 5A; 71b] that controls a supply of the display

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signal from the data line to the second pixel electrode, and that is driven based on a scan signal supplied from a second scan line [Fig. 5A; G2] subsequent to the first scan line; and a third switching device [Fig. 5A; 71a] that is driven based on the scan signal supplied from the first scan line, and that controls ON and OFF of the second switching device (see Column 3, Line 59 - Column 4, Line 36).

### *Response to Arguments*

21. Applicants' arguments filed 30 October 2007 have been fully considered but they are not persuasive.

The Applicants contend, "the spacer 51 of IADPA can only prescribe the distance between the substrate and the counter substrate, but is not in direct physical contact with the entire exposed surface of at least one of the first and second wires" (see Page 7 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

The Instant Application's Description of Prior Art discloses an image display element/device, comprising: a plurality of data lines to which display signals are applied (see Page 1, Line 19), the data lines being embedded in a substrate [i.e., "TFT array substrate"]; a plurality of scan lines to which scan signals are applied (see Page 1, Line 19), the scan lines being embedded in the substrate (see Page 1, Lines 10-25); a first wire [Fig. 6A; 32] having a surface which is exposed [see Fig. 10 -- wherein a surface portion is "exposed" to insulative spacer 51].

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The applicants next contend, "if the insulating layer 104 of Watanabe is used to prescribe the distance between the pair of substrates, there will be no place for the liquid crystal layer because the insulating layer 104 of Watanabe will fill the whole cavity between the first and second substrates; thus, making the device of the IADPA (and Watanabe for that matter) inoperable because there is no liquid crystal layer" (see Pages 7-8 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

Watanabe discloses at least one place for a liquid crystal layer [Fig. 1; 107] (see Column 3, Lines 23-25).

The applicants next contend, "the PTO asserts that it would have been obvious to place the insulating layer 104 of Watanabe in direct physical contact with the entire exposed surface of at least one of a first and second wires of the IADPA so as to provide the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates. It is respectfully submitted that the proposed motivation is not sufficient because the spacer 51 of the **IADPA already provides this function**, and the insulating layer 104 of Watanabe does not (which is why Watanabe requires spacers 108) so there is no logical reason why one with ordinary skill in the art would consider the insulator layer of Watanabe to fulfill this function when a different element is required to perform it" (see Page 8 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

Although the applicants appear here to potentially be conceding that the IADPA provides such a great degree of functionality on its own that the secondary reference of Watanabe is wholly unnecessary; the examiner will reiterate that the IADPA not expressly disclose that *no*



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*portion of the at least one of the first and second wires is in direct physical contact with the liquid crystal layer.* Whereas, Watanabe does disclose an insulator [Fig. 1; 104] in direct physical contact with the entire exposed surface of at least one of a first and second wire [Fig. 1; 102, 103] *such that no portion of the at least one of the first and second wires is in direct physical contact with a liquid crystal layer* [Fig. 1; 107] (see Column 3, Lines 17-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art (*such that no portion of the at least one of the first and second wires is in direct physical contact with a liquid crystal layer*), so as to provide the entire panel uniformly with a prescribed gap and for fixing the alignment of the pair of substrates.

The applicants next contend, "neither Watanabe nor the IADPA teaches an insulator that is also a spacer" (see Page 8 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

Watanabe discloses an insulator [Fig. 1; 104] which inherently takes up space, and thereby fully qualifies as a "spacer."

Moreover, the IADPA discloses, "The spacer 51 is formed with a silica material or the like, and therefore, does not have current conductivity" (see Page 21, Lines 23-24).

The applicants next contend, "One of skill in the art would not understand the insulating layer 104 of Watanabe and the spacer 51 to be equivalent because they are used for different

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purposes. Furthermore, one with ordinary skill in the art would not view the insulator layer 104 of Watanabe as a suitable substitute for the spacer 51 of the IADPA because Watanabe, itself, teaches the use of the spacers 108 and the insulating layer 104. If they are equivalent and can provide the same function, why would you need both?" (see Page 9 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

The examiner is not attempting to suggest or argue the obviousness of substituting one element of Watanabe for another element of Watanabe. The examiner is instead merely pointing out that the IADPA teaches one narrow insulator/spacer [Fig. 10; 51]; whereas Watanabe discloses a wider insulator/spacer [Fig. 1; 104]. And an artisan would be fully capable of substituting one for the other -- because they are both used for the same purpose of, for example, preventing/limiting electrical conductivity.

The applicants next contend, "there is no teaching that the insulator and the spacer are the same device. Indeed, there is only the teaching of an insulator and spacer as separate elements (Fig. 1 of Watanabe)" (see Page 9 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

Watanabe discloses an insulator [Fig. 1; 104] which inherently takes up space, and thereby fully qualifies as a "spacer."

Moreover, the IADPA discloses, "The spacer 51 is formed with a silica material or the like, and therefore, does not have current conductivity" (see Page 21, Lines 23-24).

The applicants next contend, "the PTO has not established that there is a finite number of known options and how one skilled in the art would come by these known options" (see Page 9 of the Amendment filed 30 October 2007). However, the examiner respectfully disagrees.

It would have been obvious to one of ordinary skill in the art at the time of invention to place Watanabe's insulator in direct physical contact with the entire exposed surface of at least one of a first and second wire of the Instant Application's Description of Prior Art, because a person of ordinary skill has good reason (e.g., providing insulation around wires reduces signal crosstalk and leakage) to pursue the known options within his or her technical grasp (i.e., using additional amounts, sizes, shapes of insulation, for example). If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. An artisan would not be overwhelmed by an infinite number of options when contemplating widening the IADPA's insulator/spacer [Fig. 10; 51] to more completely cover a wire [Fig. 10; 47] -- as taught by Watanabe, for instance.

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeff Piziali  
22 January 2008